

FILE NO.

Service Manual

CD Radio Cassette Recorder

AWM-2100 (US)

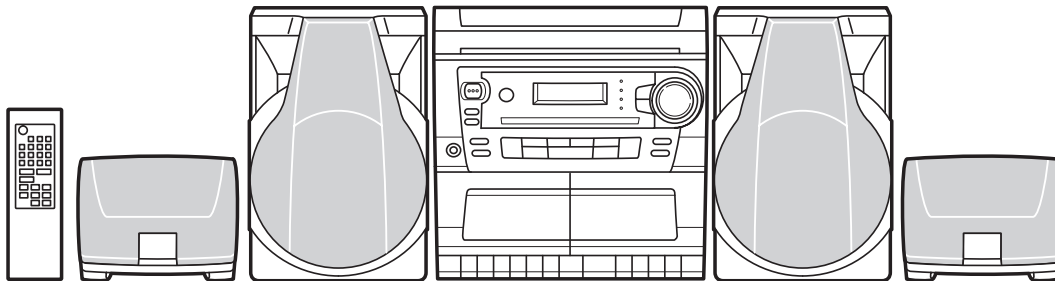
DC-C200 (CA)

DC-S200 (PA)

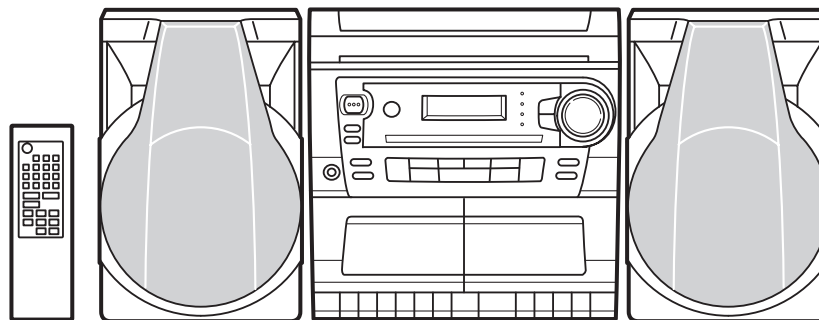
(AU)

(XE)

(KR)



US,CA



PA,AU,XE,KR

PRODUCT CODE No.

129 583 00 AWM-2100 (US)

129 583 01 DC-C200 (CA)

129 583 02 DC-S200 (XE)

129 583 03 DC-S200 (AU)

129 583 04 DC-S200 (PA)

129 583 05 DC-S200 (KR)

(This is basic specification)

(AMPLIFIER SECTION)

Output power 5 w x 2 (at 4 ohms, 10% dissipation)
Sound presets 4 electronic presets
Bass expander +8dB (at low volume level)
VIDEO in (AUDIO) 400 mV/50 kohms
Inputs VIDEO : 400 mV/50k ohms
Outputs..... SPEAKER : 4 ohms
 PHONES : 32 ohms

(TUNER SECTION)

(FM)

Frequency range 87.5 - 108 MHz (200kHz steps)
Usable sensitivity 26 dBf (mono)

(AM)

Frequency range 530 kHz - 1710 kHz (10kHz steps)
Usable sensitivity 200 μ V/m (AM loop antenna)

(CASSETTE DECK SECTION)

Track System 4-track, 2-channel stereo
Erasing System Magnet erase
Frequency response 25 Hz to 8 kHz
Wow / Flutter 0.3%(WRMS)
Fast forward/rewind time Approx. 120 sec. (C-60)
Signal-to-noise ratio 45 dB
Tape speed 4.75 cm/sec.

(CD SECTION)

Type	Changer, 3disc
Channels	2 channel stereo
S/N ratio	60 dB
Wow / Flutter	Below measurable limits
Sampling frequency	44.1 kHz
Quantization	16 bits linear/ch
Pick-up	Optical 3-beam Semi-conductor laser
Pickup wave length	790 nm
Laser output	Continuous wave max. 0.6 mW
Frequency response	20 Hz to 10 kHz

(GENERAL)

Power source AC : 110 - 120/220 - 240V, 50/60Hz (PA)
AC : 230 - 240V , 50Hz (AU,XE)
AC : 120V , 60Hz (US,CA)

Power consumption 42W

Dimensions 279 (W) x 290 (H) x 348 (D) mm

Weight (approx.)..... 5.8 kg

(RB-S200 WIRELESS REMOTE CONTROL)

Power requirements 2 "AA" batteries
Dimensions approx. 55(W) x 163(H) x 3(D) mm
Weight approx. 85g (without batteries)

(AWM-2100SP SPEAKER SYSTEM)

Type Full range bass reflex
Drivers 4.7" Dia (12 cm)
Unit used 12 cm cone type
Maximum power-handling capacity

..... 10 W (peak)
Nominal impedance 4 ohms
Dimensions 191 (W) x 290 (H) x 183 (D) mm
Weight (approx.)..... 1.4 kg (per speaker)

(SX-SR2100 SURROUND SPEAKER SYSTEM) (US , CA)

Type	Full range
Drivers	3.1" Dia (8 cm)
Unit used	12 cm cone type
Maximum power-handling capacity	7 W (peak)
Nominal impedance	6 ohms
Dimensions	168 (W) x 88 (H) x 120 (D) mm
Weight (approx.)	340 g (per speaker)

Specifications subject to change without notice.

SAFETY PRECAUTION

- Pickup that emits a laser beam is used on this CD section.

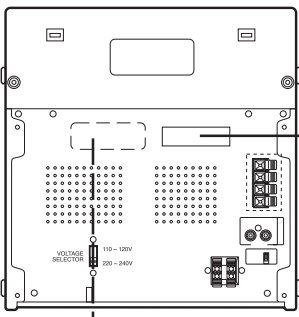



Diagram of the back of a CD player showing internal components and a laser warning label. The label reads: CLASS 1 LASER PRODUCT, LUOKAN 1 LASERLÄITE, KLASS 1 LASERAPPARAT.

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.	
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGA UDSÆTTELSE FOR STRÅLING.	
VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.	
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.	
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	

(AU,PA,XE)

CD ADJUSTMENTS

CD PLAYER ADJUSTMENT PROCEDURES

Adjusting Conditions:

- Test disc: Sony YEDS-18
- Pre-operating : Push open/close key to open the CD tray.
Load test disc YEDS-18, then push this key once against to close tray.

- Oscilloscope:

1) Adjustment of E/F balance

- After TOC. push play/pause key once to play and push SEARCH key to search.
- Connect the scope between the measurement points.(TSO , V-CEN)
- Then adjust the VR701 until A=B(as figure A)

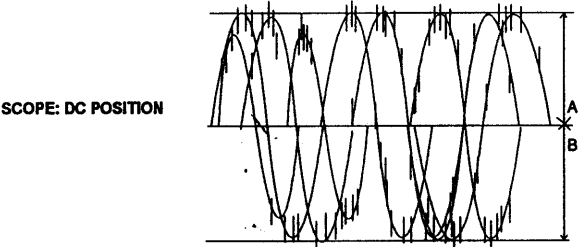


Figure A

2) Adjustment of RF (EYE PATTERN)

- After TOC. push play/pause key once play.
- Connect the scope and Jitter meter between the measurement points (RF , V-CEN)
- Adjustment VR702 until the wave form of eye pattern. Become may or jitter value MIN.
(as Figure B)

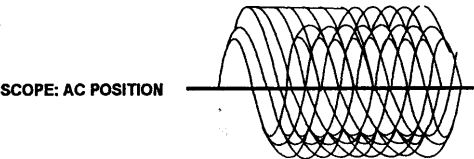
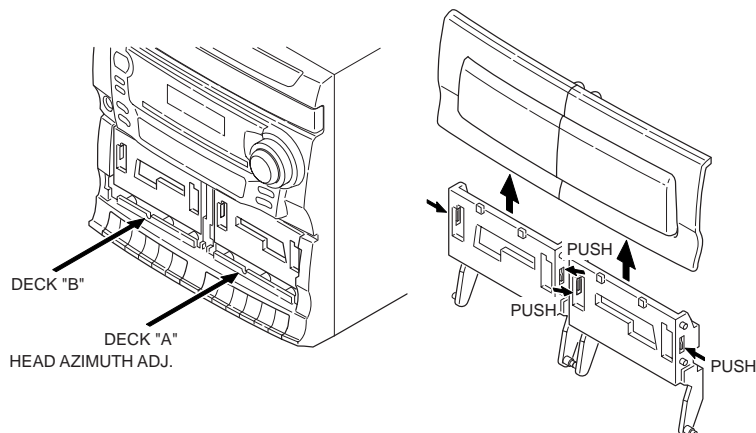


Figure B

TAPE DECK ADJUSTMENTS

Play/Record and Playback Head Azimuth Adjustment.

To adjust the play/record and playback head azimuth screw :



1. Connect two (2) VTVMs and a dual trace scope to the stereo headphone Jack (as shown) with a 32 ohm dummy load. (See Figure 1)

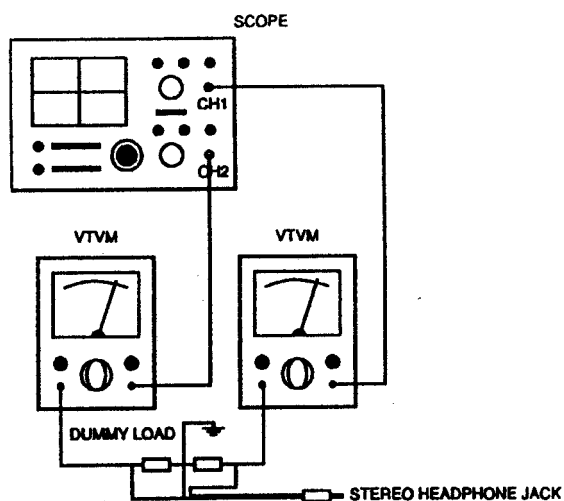


Figure1. Azimuth Adjustment

2. Insert a 8 kHz test tape into the tape mechanism and play it back.
3. While playing back the test tape, slowly turn the azimuth adjusting screw until the amplitude of both channel output waveforms is maximum and inphase. (See Figure 2)
4. Secure the azimuth screw in place with glue or paint after making the adjustments.

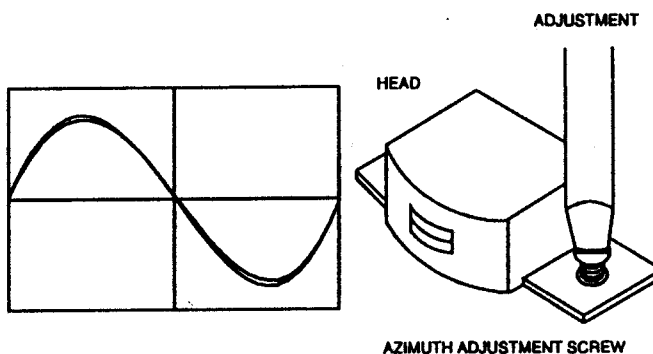
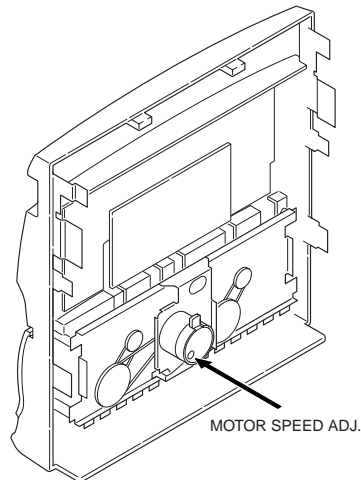


Figure2. Head output Signal

TAPE DECK ADJUSTMENTS

Tape Speed Adjustment

1. Set the function switch to TAPE.



2. Connect a frequency counter with a 32 ohm dummy load to the stereo headphone jack. (See Figure 3.)

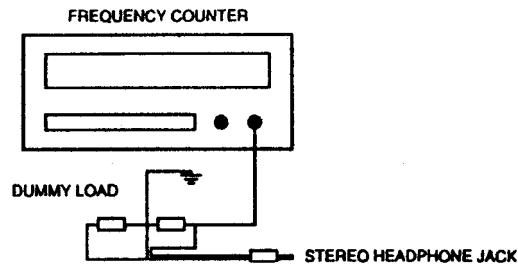


Figure3. Tape Speed Adjustment

3. Insert and play back a 8 kHz test tape into the tape mechanism.
4. Insert an insulated alignment tool and adjust the tape speed potentiometer until the frequency counter indicates 2940 Hz to 3090 Hz.

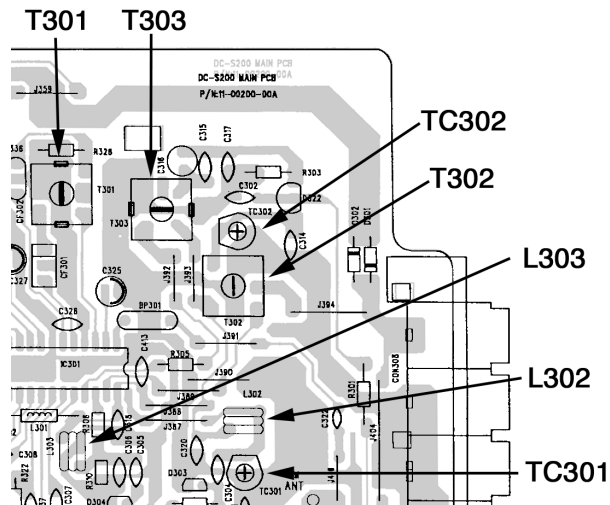
Record AC Bias Frequency alignment procedure

1. Insert a cassette tape into the cassette compartment.
2. Connect the frequency counter to the MAIN PCB (C375).
3. Press the REC button.
4. Adjust T305.
5. Adjust for 61 kHz \pm 2 kHz.

TUNER ADJUSTMENTS

(This is basic adjustment)

PARTS LOCATION



Equipment needed:

1. AM Signal generator
2. FM Signal generator
3. DC Voltage meter
4. Oscilloscope
5. Output meter (VTVM)

AM Alignment:- Use AM S/G and loop antenna

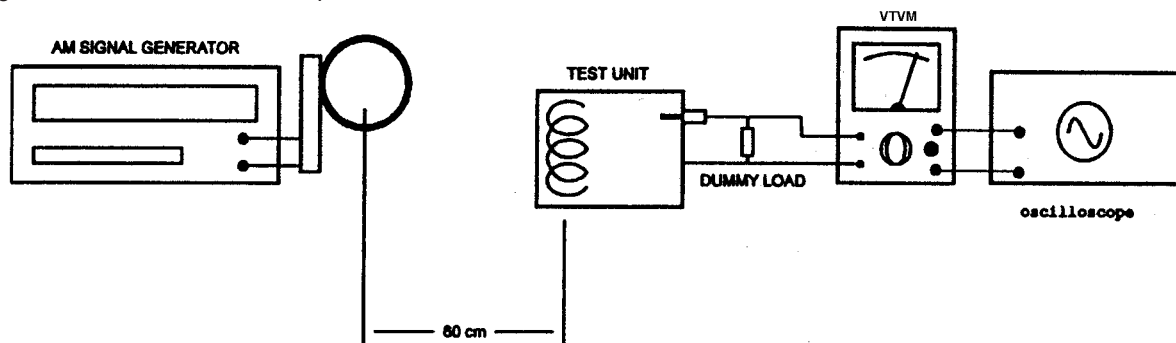


Figure4. AM IF/RF Tracking

Band	STEP	S/G FREQUENCY	DIAL SETTING	ADJUSTMENT	REMARKS
AM-IF	1	450 kHz	600 kHz	T301	Adjust for best IF waveform (at detector output)
AM-RF	2	530 kHz	530 kHz	T303	Adjust for VT=1V
	3	600 kHz	600 kHz	T302	Adjust for maximum indication.
	4	1400 kHz	1400kHz	TC302	Adjust for maximum indication.
	5	Repeat step 2 and 4 as required			

TUNER ADJUSTMENTS

(This is basic adjustment)

FM Alignment:

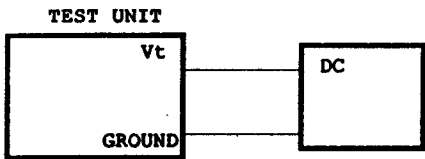


Figure5. FM Band Frequency Coverage Alignment

Connect FM signal to ANT inputs (mod. 1 kHz 22.5 kHz dev.)

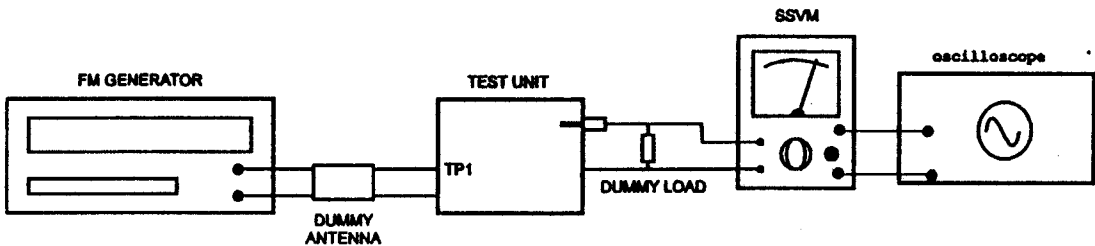
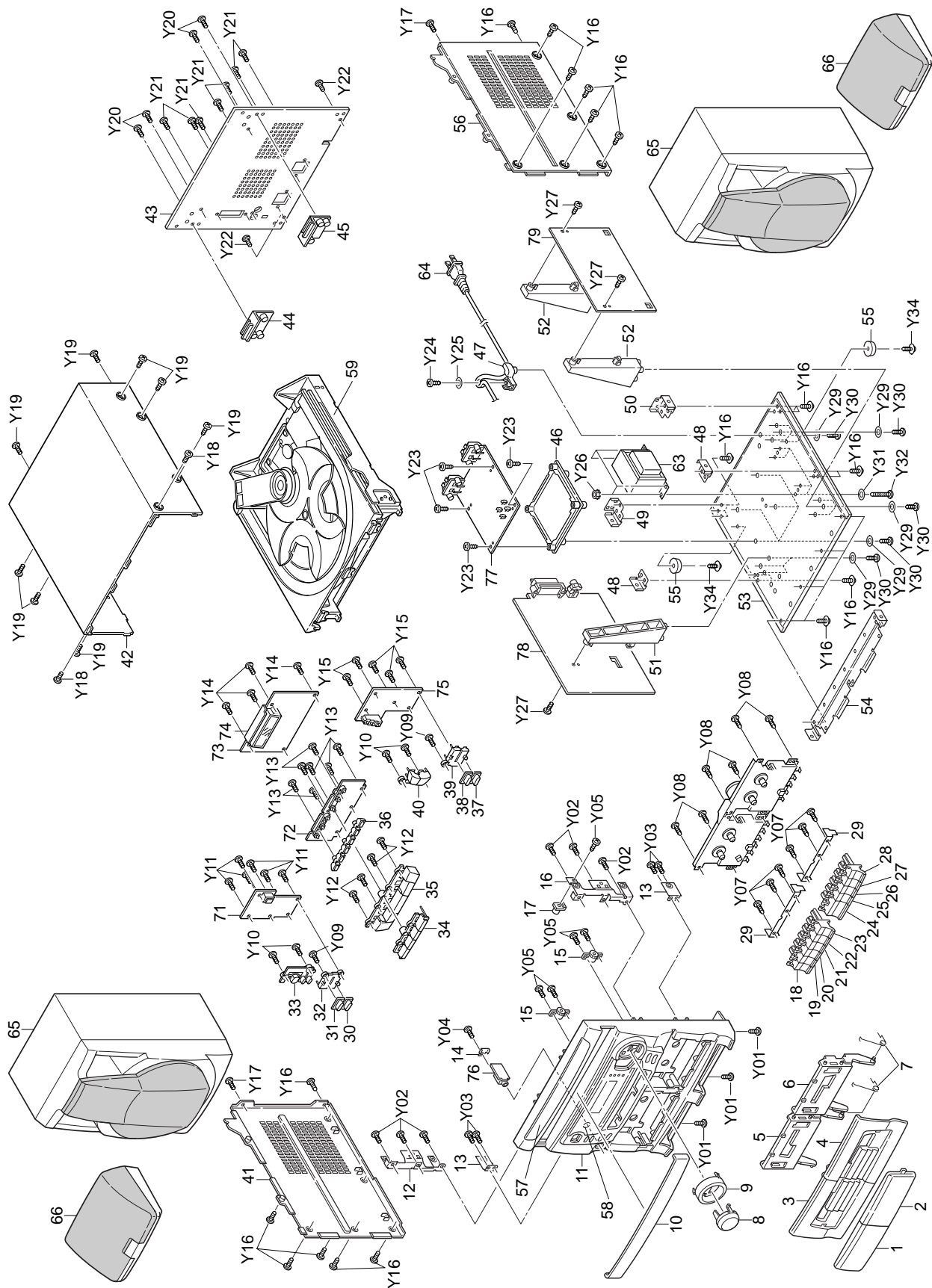


Figure6. FM Band/Tracking

Band	Step	S/G FREQUENCY	DIAL SETTING	ADJUST	REMARK
FM-RF	1	87.5 MHz	87.5 MHz	L303	Adjust for VT=2.6V
	2	90.1 MHz	90.1 MHz	L302	Adjustment for maximum output
	3	106.1MHz	106.1MHz	TC301	Adjustment for maximum output
	4	Repeat steps 1 and 3 as required.			

EXPLODED VIEW(CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATE COMPONENTS IN WHICH SAFETY CAN OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED Δ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50V and less than 1000 μ F of Ceramic type and Electrolytic type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	645 029 1760	POLYBAG W/RCY,AC CORD
	645 043 2668	CARTON CASE,OFF SET(US)
	645 043 2699	CARTON CASE,OFF SET(CA)
	645 043 3276	CARTON CASE,OFF SET(PA)
	645 043 3283	CARTON CASE,OFF SET(AU)
	645 043 3290	CARTON CASE,OFF SET(XE)
	645 043 2712	POLYBAG,FOR AM ANT LOOP
	645 043 2729	POLYBAG,I/B
	645 043 2736	POLYBAG,MAIN UNIT
	645 043 2743	POLYFOAM TOP,MAIN TOP
	645 043 2750	POLYFOAM BOTTOM,MAIN BOTTOM
	645 043 2897	INSTRUCTION MANUAL(US)
	645 043 2910	INSTRUCTION MANUAL(CA)
	645 043 3306	INSTRUCTION MANUAL(PA)
	645 043 3320	INSTRUCTION MANUAL(AU)
	645 043 3313	INSTRUCTION MANUAL(XE)
	645 043 2927	POLY BUBBLE BAG,MAIN BOTTOM
	645 041 7153	REMOCON, U-RE-SAN REMOTE ASSY

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	645 043 2026	CASS DOOR LENS L
2	645 043 2033	CASS DOOR LENS R
3	645 043 2507	CASS DOOR L
4	645 043 2514	CASS DOOR R
5	645 043 2064	CASS DOOR BKT L
6	645 043 2071	CASS DOOR BKT R
7	645 043 1814	CASS DOOR SPRING,SUS304
8	645 043 2224	KNOB VOL.,UP/DOWN
9	645 043 2200	VOL DECORATION RING
10	645 043 2521	CD CHANGER DOOR
11	645 043 2439	CAB FRONT
12	645 043 1838	3CD MTG BKT L
13	645 043 1852	CAB MTG BKT
14	645 043 1821	HEADPHONE MTG PLATE,M14
15	645 043 0671	CD GEAR ASSY
16	645 043 1845	3CD MTG BKT R
17	645 043 2217	BKT DRAWER FIXING
18	645 043 2231	KNOB CASS RECORD B
19	645 043 2248	KNOB CASS PLAY B
20	645 043 2255	KNOB CASS REWIND B
21	645 043 2262	KNOB CASS F FWD B
22	645 043 2279	KNOB CASS STOP/EJECT
23	645 043 2286	KNOB CASS PAUSE B
24	645 043 2293	KNOB CASS PLAY A
25	645 043 2309	KNOB CASS REWIND A
26	645 043 2316	KNOB CASS F FWD A
27	645 043 2323	KNOB CASS STOP/EJECT
28	645 043 2330	KNOB CASS PAUSE A
29	645 043 1869	CASS KNOB STOPPER
30	645 043 2354	KNOB CAP BAND

REF.NO.	PART NO.	DESCRIPTION
31	645 043 2347	KNOB CAP FUNCTION
32	645 043 2088	BKT KNOB,FUNCTION/BAND
33	645 043 2408	KNOB PWR/MEM/MODE
34	645 043 2385	KNOB DISC SELECT
35	645 043 2392	KNOB CD CONTROL
36	645 043 2101	BKT MOTION LED REFLE
37	645 043 2361	KNOB CAP PRESET DOWN,DOWN
38	645 043 2378	KNOB CAP PRESET UP,UP
39	645 043 2095	BKT PRESET KNOB,UP/DOWN
40	645 043 2415	KNOB SOUND PRESET/BA
41	645 043 2484	SIDE PANEL L
42	645 043 2446	CAB TOP REAR
43	645 043 2651	FIBRE BOARD,REV 1
44	645 043 2170	BKT 3CD L
45	645 043 2187	BKT 3CD R
46	645 043 2163	BKT PCB MTG D,UNDER PWR BD
47	645 043 2194	HOLDER AC CORD
48	645 043 1883	SIDE PANEL BKT L/R
49	645 043 1906	SIDE PANEL BKT L
50	645 043 1890	SIDE PANEL BKT R
51	645 043 2156	BKT PCB MTG B,BOTTOM WOODEN
52	645 043 2149	BKT PCB MTG A,BOTTOM WOODEN
53	645 043 2644	WOODEN PLATE BOTTOM
54	645 043 1876	CAB METAL BOTTOM BKT
55	645 043 2590	RUBBER STAND
56	645 043 2491	SIDE PANEL R
57	645 043 0640	ASSY TOP LENS
58	645 043 2019	DISPLAY LENS
59	645 043 0763	3CD CHANGER + CTL PC, CDM3C/ASSY PWB 3CD DRIVE(US)

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	645 029 1548	SCREW M3X6 BH/MS, F CAB TO CAB MTL BOTT BK
Y02	645 029 1616	SCREW 3X8 BH/ST, 3CD TO 3CD M BKT L/R
Y03	645 029 1616	SCREW 3X8 BH/ST,CAB MTG BKT
Y04	645 029 1616	SCREW 3X8 BH/ST,H/P PLT
Y05	645 029 1616	SCREW 3X8 BH/ST,GEAR HOLDER
Y07	645 029 1609	SCREW 2.6X10 BH/ST,KEY BD A
Y08	645 029 1623	SCREW 3X10 BH/ST,DECK TO F/C
Y09	645 029 1586	SCREW 2.6X8 BH/ST, FUN/BAND KNOB BKT, PRESET UP/DOWN KNOB BKT
Y10	645 029 1586	SCREW 2.6X8 BH/ST, PO/MEM/MODE KNOB, KEY BD A FUN/BASS
Y11	645 043 1968	SCR 3X8,PCB BKT A
Y12	645 029 1586	SCREW 2.6X8 BH/ST, CD CONTROL KNOB
Y13	645 029 1586	SCREW 2.6X8 BH/ST, CD CTL/DISC SELECT KNOB

PARTS LIST

REF.NO. PART NO. DESCRIPTION

Y14	645 029 1609	SCREW 2.6X10 BH/ST,KEY BD C
Y15	645 029 1609	SCREW 2.6X10 BH/ST, KEY BD C PRESET U/D KEY
Y16	645 043 1937	SCR 3X12, W PLT BOTT TO SIDE PANEL
Y17	645 035 4410	SCR M3X10,SIDE PANEL L/R
Y18	645 029 1548	SCREW M3X6 BH/MS, S PANEL L/R TO CAB MTG B
Y19	645 029 1616	SCREW 3X8 BH/ST,F/C
Y20	645 029 1616	SCREW 3X8 BH/ST,3CD BD TO DECK
Y21	645 029 1623	SCREW 3X10 BH/ST, FIBRE BD TO 3CD BKT L/R
Y22	645 029 1548	SCREW M3X6 BH/MS, FIBRE BD TO PANEL BKT L/
Y23	645 029 1616	SCREW 3X8 BH/ST, PWR BD TO M BKT D
Y24	645 043 1968	SCR 3X8,CORD BKT
Y25	645 029 1616	SCREW 3X8 BH/ST, F WASHER TO CORD HOLDER
Y26	645 043 1807	STEEL NUT,HEAT SINK TO PWR PCB
Y27	645 029 1616	SCREW 3X8 BH/ST,CD BD TO M BKT A
Y29	645 029 1135	METAL WASHER 12X4X1MM, WOODEN BOTT TO PWR TRANS, AC CORD HOLDER TOP
Y30	645 043 1937	SCR 3X12, W PLT BOTT TO CAB METL B
Y31	645 043 1791	KEPS NUT, PWR TRANS TO WOODEN BOTT
Y32	645 043 1944	SCR 4X20, W PLT BOTT TO PWR TRANS
Y34	645 043 1982	SCR 3X12, RUBBER STAND TO WOODEN B

ELECTRIC-PART

REF.NO.	PART NO.	DESCRIPTION
63	△ 645 043 1203	PWR TRANS,T04893A(US,CA)
63	△ 645 043 3238	PWR TRANS(PA)
63	△ 645 043 3245	PWR TRANS(AU)
63	△ 645 043 3221	PWR TRANS(XE)
64	△ 645 043 1616	AC CORD(US,CA)
64	△ 645 043 3252	AC CORD(PA,XE)
64	△ 645 043 3269	AC CORD(AU)
65	645 043 0749	MAIN SPK BOX
66	645 041 7146	SPEAKER
	645 043 1425	AM ANT,LOOP TYPE 4910
	△ 645 035 7640	VOLTAGE SELECTOER(PA)
	645 043 1364	6P HSG,CASS BD TO MAIN CN305
	645 043 1371	6P HSG CABLE,CN702 TO CD MECHA
	645 043 1388	3P HSG,CASS DECK TO MAIN CN303
	645 043 1395	5P HSG,CASS DECK TO MAIN CN304
	645 043 1432	7P CABLE,KEY BD B TO KEY BD A
	645 043 1449	8P CABLE,KEY BD B TO KEY BD C
	645 043 1456	16P CABLE,KEY BD B TO DISPLAY BD
	645 043 1463	2P RAINBOW CABLE, DISPLAY BD TO LED BD
	645 043 1470	16P FFC,CN701 TO PICK UP

KEY(A) P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 313 0918	ASSY,PWB,KEY A(Only initial)
D0217	645 043 0909	SENSOR,RPM6938-V4
SW201	645 028 9606	TACT SW 1P2T 4.3MM EVQ,POWER
SW202	645 028 9606	TACT SW 1P2T 4.3MM EVQ,MEMORY
SW204	645 028 9606	TACT SW 1P2T 4.3MM EVQ,FUNCTION
SW205	645 028 9606	TACT SW 1P2T 4.3MM EVQ,FM-MODE
SW209	645 028 9606	TACT SW 1P2T 4.3MM EVQ,BAND

KEY(B) P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 313 0925	ASSY,PWB,KEY B(Only initial)
D0222	645 028 9491	LED 3MM GREEN
D0223	645 028 9491	LED 3MM GREEN
D0224	645 028 9491	LED 3MM GREEN
D0225	645 028 9491	LED 3MM GREEN
D0226	645 028 9491	LED 3MM GREEN
D0227	645 028 9491	LED 3MM GREEN
Q0207	645 028 9453	TR. 2SA608-F SP
Q0208	645 028 9453	TR. 2SA608-F SP
Q0209	645 028 9453	TR. 2SA608-F SP
Q0210	645 028 9453	TR. 2SA608-F SP
Q0211	645 028 9453	TR. 2SA608-F SP
Q0212	645 028 9453	TR. 2SA608-F SP
SW203	645 028 9606	TACT SW 1P2T 4.3MM EVQ,STOP
SW206	645 028 9606	TACT SW 1P2T 4.3MM EVQ, OPEN/CLOSE
SW214	645 028 9606	TACT SW 1P2T 4.3MM EVQ, DOWN/R-SKIP
SW215	645 028 9606	TACT SW 1P2T 4.3MM EVQ,UP/F-SKIP
SW216	645 028 9606	TACT SW 1P2T 4.3MM EVQ, PLAY/PAUSE
SW217	645 028 9606	TACT SW 1P2T 4.3MM EVQ,DISK 1
SW218	645 028 9606	TACT SW 1P2T 4.3MM EVQ,DISK 2
SW219	645 028 9606	TACT SW 1P2T 4.3MM EVQ,DISK 3
SW220	645 028 9606	TACT SW 1P2T 4.3MM EVQ,DISK SKIP

DISPLAY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 313 0901	ASSY,PWB,DISPLAY(Only initial)
	645 043 2576	FOAM RUBBER
	645 043 1319	7P HSG CABLE,TO CD PCB CN703
	645 043 1326	8P HSG CABLE, TO 3CD DRIVER PCB CN601
	645 043 1333	13P HSG CABLE,TO MAIN CON309
D0201	645 035 2607	DIODE 1N4148
D0202	645 035 2607	DIODE 1N4148
D0203	645 035 2607	DIODE 1N4148
D0204	645 035 2607	DIODE 1N4148
D0205	645 035 2607	DIODE 1N4148
D0207	645 035 2607	DIODE 1N4148,1/8 FM IF DISABLE
D0210	645 035 2607	DIODE 1N4148,CLK ENA
D0215	645 035 2607	DIODE 1N4148,RTC KEEP
IC201	645 043 0916	IC CPU DJ3T
IC202	645 043 0954	IC ST24C02 SGS,DIP TYPE
J0207	401 028 3200	CARBON 1K JA 1/8W
L0201	645 043 1142	INDUCTOR 100UH,CC-101K
L0202	645 043 1142	INDUCTOR 100UH,CC-101K
L0203	645 043 1142	INDUCTOR 100UH,CC-101K
LCD01	645 043 2934	LCD DISPLAY,S-200
Q0201	645 043 0794	TR 2SC1740S TPR
Q0202	645 035 2546	TR 2SC930E-SPA
SW222	645 043 1210	TACT SW,TSC063803-150
X0201	645 043 1029	CRYSTAL
X0202	645 043 1135	CERAMIC RESONATOR

PARTS LIST

LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 313 0949	ASSY,PWB,LED(Only initial)
D0228	645 028 9491	LED 3MM GREEN
D0229	645 028 9491	LED 3MM GREEN
D0230	645 028 9491	LED 3MM GREEN
D0231	645 028 9491	LED 3MM GREEN
D0232	645 028 9491	LED 3MM GREEN
D0233	645 028 9491	LED 3MM GREEN

KEY(C) P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 313 0932	ASSY,PWB,KEY C(Only initial)
D0218	645 035 3000	LED,JAZZ
D0219	645 035 3000	LED,POP
D0220	645 035 3000	LED,CLASSIC
D0221	645 035 3000	LED,ROCK
Q0203	645 028 9453	TR. 2SA608-F SP
Q0204	645 028 9453	TR. 2SA608-F SP
Q0205	645 028 9453	TR. 2SA608-F SP
Q0206	645 028 9453	TR. 2SA608-F SP
SW207	645 028 9606	TACT SW 1P2T 4.3MM EVQ,VOL-DN
SW208	645 028 9606	TACT SW 1P2T 4.3MM EVQ,VOL-UP
SW210	645 028 9606	TACT SW 1P2T 4.3MM EVQ,MEM-UP
SW211	645 028 9606	TACT SW 1P2T 4.3MM EVQ,MEM-DN
SW212	645 028 9606	TACT SW 1P2T 4.3MM EVQ,EQ
SW213	645 028 9606	TACT SW 1P2T 4.3MM EVQ,X-BASS

HEADPHONE P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 313 0956	ASSY,HEADPHONE(Only initial)
	645 043 1357	HSG 5P,TO PWR BD CN502
HP501	645 043 1197	HEADPHONE JACK,EJ-3511-202B

POWER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
77	614 313 0895	ASSY,PWB,PWR PCB(Only initial)
	645 029 0015	FUSE HOLDER,F501
	645 043 1913	HEAT SINK,FOR IC501,502
C0505	403 058 5209	POLYESTER 0.15U K 50V
C0506	403 058 5209	POLYESTER 0.15U K 50V
C0528	403 056 7908	POLYESTER 1000P K 50V
C0529	403 056 7908	POLYESTER 1000P K 50V
CN501	645 043 1340	HSG 2P,TO CD CON704
CN502	645 028 9651	5 PIN HEADER P=2.5,HEADPHONE BD
CN503	645 043 1166	TERMINAL BOARD, SURROUND SPK 2WAY PUSH
CN504	645 043 1166	TERMINAL BOARD, MAIN SPK 2WAY PUSH
CN505	645 043 1265	HEADER 8P,MAIN CON307
D0501	645 043 0824	DIODE RECTIFIER RL20
D0502	645 043 0824	DIODE RECTIFIER RL20
D0503	645 043 0824	DIODE RECTIFIER RL20
D0504	645 043 0824	DIODE RECTIFIER RL20
D0505	645 043 0848	DIODE 1N4001
D0506	645 043 0848	DIODE 1N4001
D0507	645 043 0848	DIODE 1N4001
D0508	645 043 0848	DIODE 1N4001
D0509	645 035 2607	DIODE 1N4148
D0510	645 035 2638	ZENER DIODE 9.1V
F0501	645 043 1746	FUSE,GMC
F0502	645 043 1753	FUSE,GMC
IC501	645 043 0961	IC BA5417
IC502	645 043 0985	IC NJM7812A
Q0501	645 043 0800	TR 8050C
Q0502	645 043 0800	TR 8050C
Q0507	645 043 0800	TR 8050C

REF.NO.	PART NO.	DESCRIPTION
Q0509	645 028 9071	TR. KTD2058Y KEC
SW501	645 035 3253	SLIDE KNOB

MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
78	614 313 0864	ASSY,PWB,MAIN(Only initial)
	645 043 1739	D WIRE AWG30 UL1365,MAIN PCB
	645 043 1593	PVC TUBE,FOR C480
	645 029 0138	SPONGE 10X10X10MM,FM COIL
	645 035 3741	EYELET,FM ANT/GNDX2/OSC1.2
	645 043 0695	STRIP WIRE ASSY
	645 035 2874	FM BP FILTER
	645 043 1043	POLYESTER 390PF
BP301	403 063 0008	POLYESTER 6800P K 50V
C0316	403 063 0008	POLYESTER 6800P K 50V
C0331	403 057 0403	POLYESTER 0.01U K 50V
C0332	403 057 0403	POLYESTER 0.01U K 50V
C0333	403 057 0403	POLYESTER 0.01U K 50V
C0334	403 058 1102	POLYESTER 1500P K 50V
C0355	403 058 1102	POLYESTER 1500P K 50V
C0357	403 058 1102	POLYESTER 1500P K 50V
C0358	403 058 1102	POLYESTER 1500P K 50V
C0359	403 058 1102	POLYESTER 1500P K 50V
C0360	403 058 1102	POLYESTER 1500P K 50V
C0363	403 063 5706	POLYESTER 8200P K 50V
C0368	403 056 7908	POLYESTER 1000P K 50V
C0375	403 060 0506	POLYESTER 2700P K 50V
C0378	403 058 1102	POLYESTER 1500P K 50V
C0384	403 063 5706	POLYESTER 8200P K 50V
C0392	403 056 7908	POLYESTER 1000P K 50V
C0393	403 058 3205	POLYESTER 0.015U K 50V
C0403	403 060 6102	POLYESTER 3300P K 50V
C0404	403 060 6102	POLYESTER 3300P K 50V
C0405	403 059 5901	POLYESTER 0.022U K 50V
C0406	403 059 5901	POLYESTER 0.022U K 50V
C0409	403 059 5901	POLYESTER 0.022U K 50V
C0410	403 059 5901	POLYESTER 0.022U K 50V
C0411	403 060 6102	POLYESTER 3300P K 50V
C0412	403 060 6102	POLYESTER 3300P K 50V
C0414	403 062 6902	POLYESTER 0.056U K 50V
C0418	403 062 6902	POLYESTER 0.056U K 50V
C0457	403 060 0506	POLYESTER 2700P K 50V
C0458	403 060 0506	POLYESTER 2700P K 50V
C0467	403 059 5901	POLYESTER 0.022U K 50V
C0468	403 059 5901	POLYESTER 0.022U K 50V
CF301	645 035 2867	CERAMIC FILTER
CF302	645 028 9347	CER.FILTER SFE10.7MS3A
CF303	645 043 1128	CERAMIC DISCRIMINATO
CN301	645 043 1173	RCA JACK,CON301 RCA-213F
CN302	645 029 1340	5PIN HEADER 2MM B5B-PH, CD JP701
CN303	645 043 1234	3P HEADER,CN201 R/P HEAD
CN304	645 029 1340	5PIN HEADER 2MM B5B-PH, CN203 R/P HEAD
CN305	645 035 3338	HEADER 6PIN,MOTOR
CN307	645 043 1401	8P HSG,CON307 TO PWR CN505
CN308	645 043 1180	ANT TERMINAL,MSP-304V
CN309	645 043 1258	13P HEADER,TO CPU / DISPLAY
D0301	645 035 2607	DIODE 1N4148
D0302	645 035 2607	DIODE 1N4148
D0303	645 028 9156	TUNING DIODE SVC201SPA, TUNING DIODE
D0304	645 028 9156	TUNING DIODE SVC201SPA, TUNING DIODE
D0305	645 035 2607	DIODE 1N4148
D0306	645 035 2607	DIODE 1N4148
D0307	645 043 0886	ZENER DIODE 10V
D0308	645 035 2607	DIODE 1N4148
D0309	645 035 2607	DIODE 1N4148

PARTS LIST

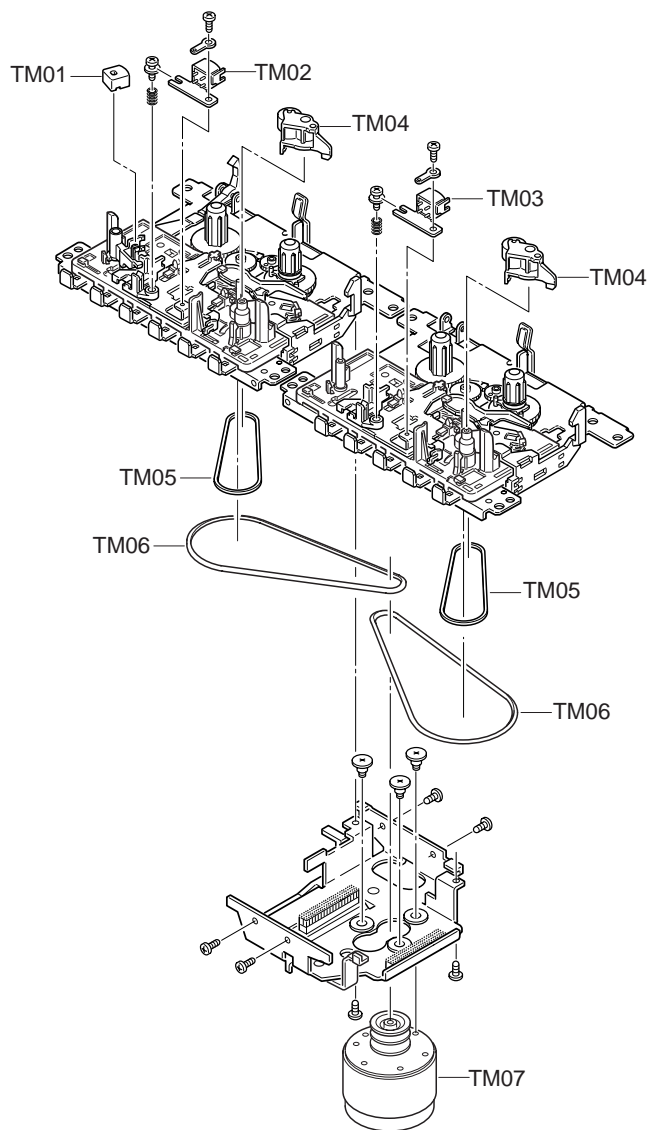
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D0310	645 035 2607	DIODE 1N4148
D0311	645 035 2607	DIODE 1N4148
D0312	645 035 2607	DIODE 1N4148
D0313	645 043 0848	DIODE 1N4001
D0314	645 028 9194	ZENER DIODE 8.2V 0.5W
D0315	645 035 2607	DIODE 1N4148
D0316	645 028 9194	ZENER DIODE 8.2V 0.5W
D0317	645 028 9170	ZENER DIODE 6.2V 0.5W
D0318	645 035 2607	DIODE 1N4148
D0319	645 035 2607	DIODE 1N4148
D0320	645 035 2607	DIODE 1N4148
D0322	645 043 0831	DIODE SVC348 S,TUNING DIODE
D0327	645 035 2607	DIODE 1N4148
D0328	645 035 2607	DIODE 1N4148
D0329	645 035 2607	DIODE 1N4148
D0330	645 035 2607	DIODE 1N4148
IC301	645 043 0930	IC TA2104AN
IC302	645 043 0992	IC TC9257F
IC303	645 035 2652	IC TA8189N
IC304	645 028 9200	IC TC4052BP
IC305	645 028 9200	IC TC4052BP
IC306	645 043 0947	IC PT2256
IC307	645 043 0923	IC UPC1330HA
L0301	645 035 3208	INDUCTOR 10UH
L0302	645 043 1111	FM COIL
L0303	645 043 1098	FM COIL
L0304	645 035 3208	INDUCTOR 10UH
L0305	645 043 1104	CHOKO COIL 47UH
L0306	645 043 1104	CHOKO COIL 47UH
Q0301	645 035 2553	TR 2SC945P
Q0302	645 035 2553	TR 2SC945P
Q0303	645 035 2553	TR 2SC945P
Q0304	645 035 2553	TR 2SC945P
Q0305	645 028 9132	TR. 9018G SAM SUNG
Q0306	645 035 2553	TR 2SC945P
Q0307	645 035 2553	TR 2SC945P
Q0308	645 043 0787	TR 2SA733P,PNP
Q0309	645 035 2553	TR 2SC945P
Q0310	645 035 2553	TR 2SC945P
Q0311	645 035 2553	TR 2SC945P
Q0312	645 043 0787	TR 2SA733P,PNP
Q0313	645 035 2553	TR 2SC945P
Q0314	645 035 2553	TR 2SC945P
Q0315	645 035 2553	TR 2SC945P
Q0316	645 043 0800	TR 8050C
Q0317	645 035 2553	TR 2SC945P
Q0318	645 035 2553	TR 2SC945P
Q0319	645 043 0800	TR 8050C
Q0320	645 035 2553	TR 2SC945P
Q0321	645 043 0800	TR 8050C
Q0322	645 035 2553	TR 2SC945P
Q0323	645 035 2553	TR 2SC945P
Q0324	645 043 0817	TR 8550C
Q0325	645 035 2553	TR 2SC945P
Q0326	645 043 0800	TR 8050C
Q0327	645 043 0800	TR 8050C
Q0328	645 035 2553	TR 2SC945P
Q0329	645 043 0800	TR 8050C
Q0330	645 035 2553	TR 2SC945P
Q0331	645 035 2553	TR 2SC945P
Q0332	645 035 2553	TR 2SC945P
Q0333	645 043 0800	TR 8050C
Q0334	645 043 0817	TR 8550C
Q0335	645 035 2553	TR 2SC945P
Q0336	645 035 2553	TR 2SC945P
Q0337	645 035 2553	TR 2SC945P
Q0338	645 035 2553	TR 2SC945P

REF.NO.	PART NO.	DESCRIPTION
SW301	645 035 3253	SLIDE KNOB,BEAT CUT SW
T0301	645 029 2521	10MM IFT YEL 810017 COILS,810017
T0302	645 043 1074	AM ANT COIL
T0303	645 043 1067	MW OSC,IFT 1A1014N
T0305	645 043 1050	REC BIAS OSC
TC301	645 043 1036	TRIMMER 10PF
TC302	645 043 1036	TRIMMER 10PF
X0301	645 043 1005	CRYSTAL 7.2MHZ

3CD DRIVER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
79	614 313 0888	ASSY,PWB,3CD DRIVER, CTL PCB 00-09200-00(Only initial)
CN601	645 028 9675	8P H. 2MM B.B PH JST,DISPLAY BD
CN602	645 043 1272	6P HEADER,CD MECH
CN603	645 043 1289	2P HEADER,CD JP702
IC601	645 043 0978	IC TA7291S
IC602	645 043 0978	IC TA7291S
J0601	645 035 3208	INDUCTOR 10UH,AXIAL LEAD
J0604	645 035 3208	INDUCTOR 10UH,AXIAL LEAD
P0601	645 043 0893	SENSOR RPI-574
P0602	645 043 0893	SENSOR RPI-574
Q0601	645 043 0800	TR 8050C
Q0602	645 043 0800	TR 8050C
ZD601	645 028 9170	ZENER DIODE 6.2V 0.5W
ZD602	645 043 0862	ZENER DIODE 5.1V
ZD603	645 043 0855	DIODE MTZJ3.3B

EXPLODED VIEW(CD & DECK MECHANISM)

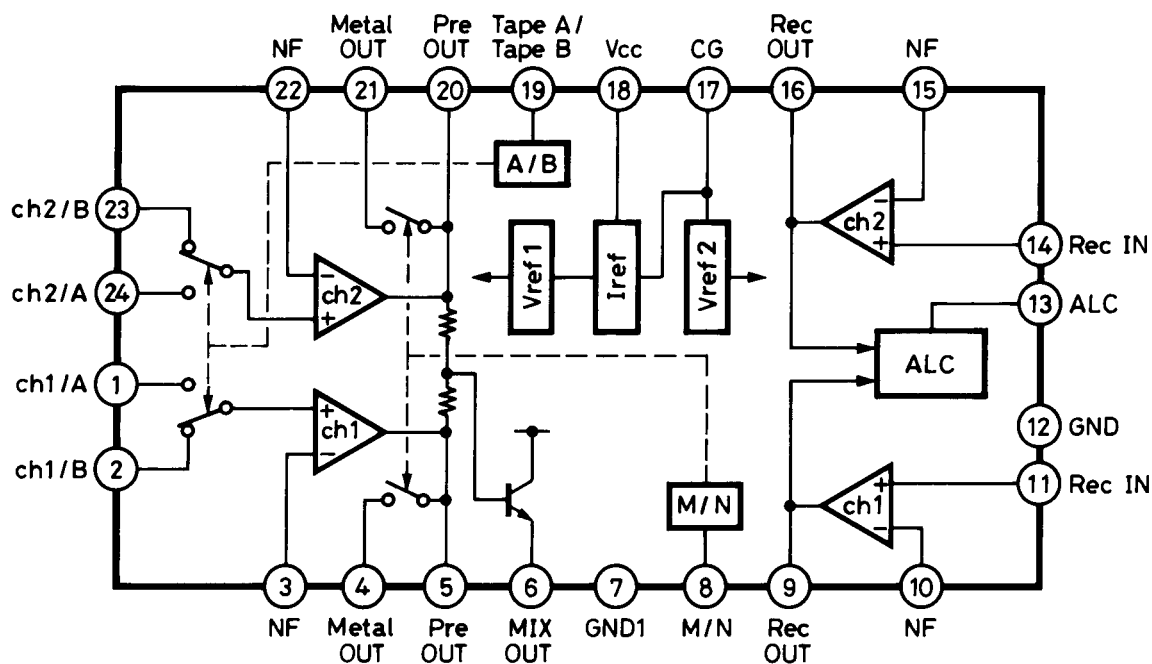


TAPE DECK MECHANISM CHASSIS (Only initial)

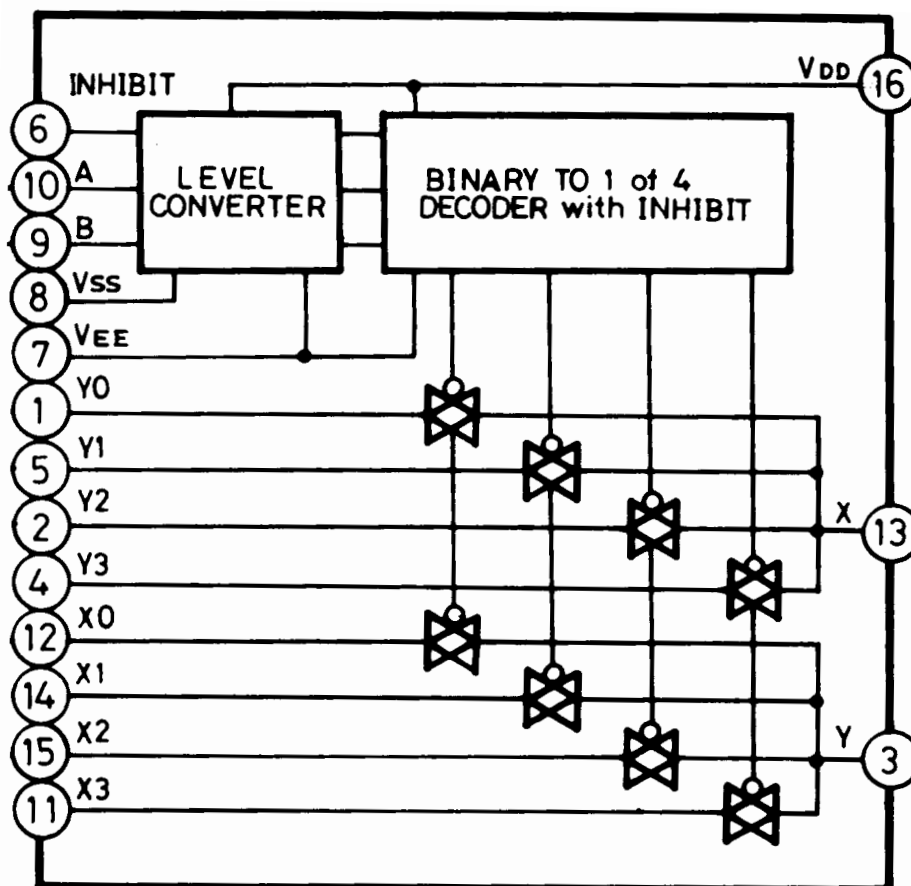
REF.NO.	PART NO.	DESCRIPTION
	645 043 2941	CASS MECHA TK20FX-SW, LANDA
TM01	645 030 6839	E HEAD, 6PA
TM02	645 043 0732	P HEAD, YB-7442BS09(RP)
TM03	645 043 0732	P HEAD, YB-7442BS09(RP)
TM04	645 009 1612	PINCH ROLLER ARM ASSY
TM05	645 009 1766	RF BELT
TM06	645 035 9613	MAIN BELT
TM07	645 043 0688	MOTOR ASSY

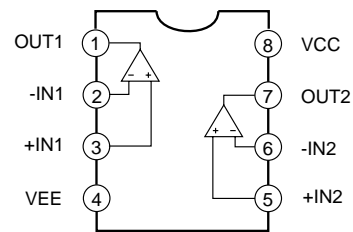
IC BLOCK DIAGRAM & DESCRIPTION

IC303 T8189N



IC304,305 TC4052BP



IC501 BA5417[illegible]

The block diagram illustrates the internal architecture of the TMS320C49 DSP, showing the flow of data and control signals between various functional blocks and the external pins.

Internal Blocks:

- PLL Circuit:** Receives VCOF, LPFO, LPFN, and PMAX signals. It provides a clock signal to the Digital Out block and the Correction System Timing Generator.
- Data slicer:** Receives DTSC1, DTSC2, and MONIT signals. It provides a clock signal to the Sync Separation ACircuit EFM Demodulation Circuit and the Correction Circuit.
- AD Converter:** Receives RF1, VREF, RFRP, SBAD, TEOF, TESH, FE1, FE2, FE3, FE4, FE5, FE6, FE7, FE8, FE9, FE10, FE11, FE12, FE13, FE14, FE15, FE16, FE17, FE18, FE19, FE20, FE21, FE22, FE23, FE24, FE25, FE26, FE27, FE28, FE29, FE30, FE31, FE32, FE33, FE34, FE35, FE36, FE37, FE38, FE39, FE40, FE41, FE42, FE43, FE44, FE45, FE46, FE47, FE48, FE49, FE50, FE51, FE52, FE53, FE54, FE55, FE56, FE57, FE58, FE59, FE60, FE61, FE62, FE63, FE64, FE65, FE66, FE67, FE68, FE69, FE70, FE71, FE72, FE73, FE74, FE75, FE76, FE77, FE78, FE79, FE80, FE81, FE82, FE83, FE84, FE85, FE86, FE87, FE88, FE89, FE90, FE91, FE92, FE93, FE94, FE95, FE96, FE97, FE98, FE99, FE100, FE101, FE102, FE103, FE104, FE105, FE106, FE107, FE108, FE109, FE110, FE111, FE112, FE113, FE114, FE115, FE116, FE117, FE118, FE119, FE120, FE121, FE122, FE123, FE124, FE125, FE126, FE127, FE128, FE129, FE130, FE131, FE132, FE133, FE134, FE135, FE136, FE137, FE138, FE139, FE140, FE141, FE142, FE143, FE144, FE145, FE146, FE147, FE148, FE149, 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IC BLOCK DIAGRAM & DESCRIPTION

IC700 TC9284BF

PIN FUNCTION

PIN No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS
1	GNDA	—	Analog ground terminal for DA converter (R channel)	—
2	RO	O	R channel data forward output terminal.	—
3	RO	O	R channel data reverse output terminal.	—
4	VDA	—	Analog power supply terminal for DA converter.	—
5	LO	O	L channel data reverse output terminal.	—
6	LO	O	L channel data forward output terminal.	—
7	GNDA	—	Analog ground terminal for DA converter (L channel)	—
8	TEST3	I	Test terminal. Normally, keep at "H" level or open.	With pull-up resistor
9	TEST4	I	Test terminal. Normally, keep at "H" level or open.	
10	TEST5	I	Test terminal. Normally, keep at "H" level or open.	
11	SBOK	O	Subcode Q data CRC check adjusting result output terminal. The adjusting result is OK at "H" level.	—
12	VDDP	—	Digital supply voltage terminal. (+5V)	—
13	GNDD	—	Digital ground terminal.	—
14	BUS0	I/O	Command and data sending/receiving input/output terminals.	Schmitt input
15	BUS1			Open drain output
17	BUS3			With pull-up resistor
18	CE	I	Command and data sending/receiving chip enable signal input terminal. The bus line becomes active at "L" level.	Schmitt input
19	BUCK	I	Command and data sending/receiving clock input terminal.	—
20	PFCK	O	Regeneration system frame periodic signal output terminal. 7.35kHz	—
21	RST	I	Reset input terminal. The internal system is reset at "L" level.	With pull-up resistor
22	SUBSYN	O	Subcode sync signal output terminal.	—
23	SUBO	O	Subcode P~W output terminals.	—
24	CLCK	J	Subcode P~W data readout clock input terminal.	—
25	VDDP	—	Digital supply voltage terminal.	—
26	GNDD	—	Digital ground terminal.	—
27	DFCT	O	Defect detection signal output terminal. VREF when defect is detected. Normally, HiZ.	—
28	TEL2	O	Tracking gain adjusting analog switch output terminals VREF or HiZ.	—
29	TEL1	O	Tracking gain adjusting analog switch output terminals VREF or HiZ.	—
30	TGUL	O	Tracking servo loop low frequency phase compensator change-over analog switch output terminal. HiZ (gain up) when detecting shock. Normally, VREF.	—


PIN FUNCTION

PIN No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS																
31	TGUH2	O	Tracking servo loop middle/high frequency phase compensator change-over analog switch output terminals.	—																
32	TGUH1		HiZ (gain up) when detecting shock. Normally, VREF. TGUH1 is used at normal regeneration and TGUH2 is used at double speed regeneration.																	
33	TKIC	O	Tracking actuator kick signal output terminal. Kicks in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.	3-state output																
34	FMON	O	Feed servo ON/OFF analog switch output terminals. Servo on at "HiZ". Servo off at "VREF".	—																
35	TEST1	I	Test terminal. Normally, keep at "H" level or open.	With pull-up resistor																
36	FMFB	O	Feed motor FWD/BWD feeding control signal output terminal. Feed in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.	3-state output																
37	TEST	I	Test terminal. Normally, keep at "H" level or open.	With pull-up resistor																
38	DMON	O	Disc motor driving circuit gain change-over analog switch output terminal.	—																
39	DMFC	O	Disc motor CLV servo AFC signal output terminal. <table border="1"><thead><tr><th>COMMAND</th><th>DMFC OUTPUT</th><th>OPERATION</th></tr></thead><tbody><tr><td>DMFK</td><td>H</td><td>Motor acceleration</td></tr><tr><td>DMSV</td><td>PWM</td><td>CLV servo ON</td></tr><tr><td>DMBK</td><td>L</td><td>Motor deceleration</td></tr><tr><td>DMOFF</td><td>VREF</td><td>CLV servo OFF</td></tr></tbody></table>	COMMAND	DMFC OUTPUT	OPERATION	DMFK	H	Motor acceleration	DMSV	PWM	CLV servo ON	DMBK	L	Motor deceleration	DMOFF	VREF	CLV servo OFF	3-state output	
COMMAND	DMFC OUTPUT	OPERATION																		
DMFK	H	Motor acceleration																		
DMSV	PWM	CLV servo ON																		
DMBK	L	Motor deceleration																		
DMOFF	VREF	CLV servo OFF																		
40	DMPC	O	Disc motor CLV servo APC signal output terminal.	3-state output																
41	2VREF	I	Double times reference voltage input terminal. (VREF × 2)	—																
42	SEL	O	Servo mode indicating signal output terminal. <table border="1"><thead><tr><th>SEL</th><th>LD ON/OFF</th><th>FOCUS SERVO</th><th>OPERATION</th></tr></thead><tbody><tr><td>L</td><td>OFF</td><td>OFF</td><td>LD OFF</td></tr><tr><td>HiZ</td><td>ON</td><td>OFF</td><td>Focus Search</td></tr><tr><td>H</td><td>ON</td><td>ON</td><td>Normal play, etc. Focus Servo ON : FOK</td></tr></tbody></table>	SEL	LD ON/OFF	FOCUS SERVO	OPERATION	L	OFF	OFF	LD OFF	HiZ	ON	OFF	Focus Search	H	ON	ON	Normal play, etc. Focus Servo ON : FOK	3-state output
SEL	LD ON/OFF	FOCUS SERVO	OPERATION																	
L	OFF	OFF	LD OFF																	
HiZ	ON	OFF	Focus Search																	
H	ON	ON	Normal play, etc. Focus Servo ON : FOK																	

PIN FUNCTION

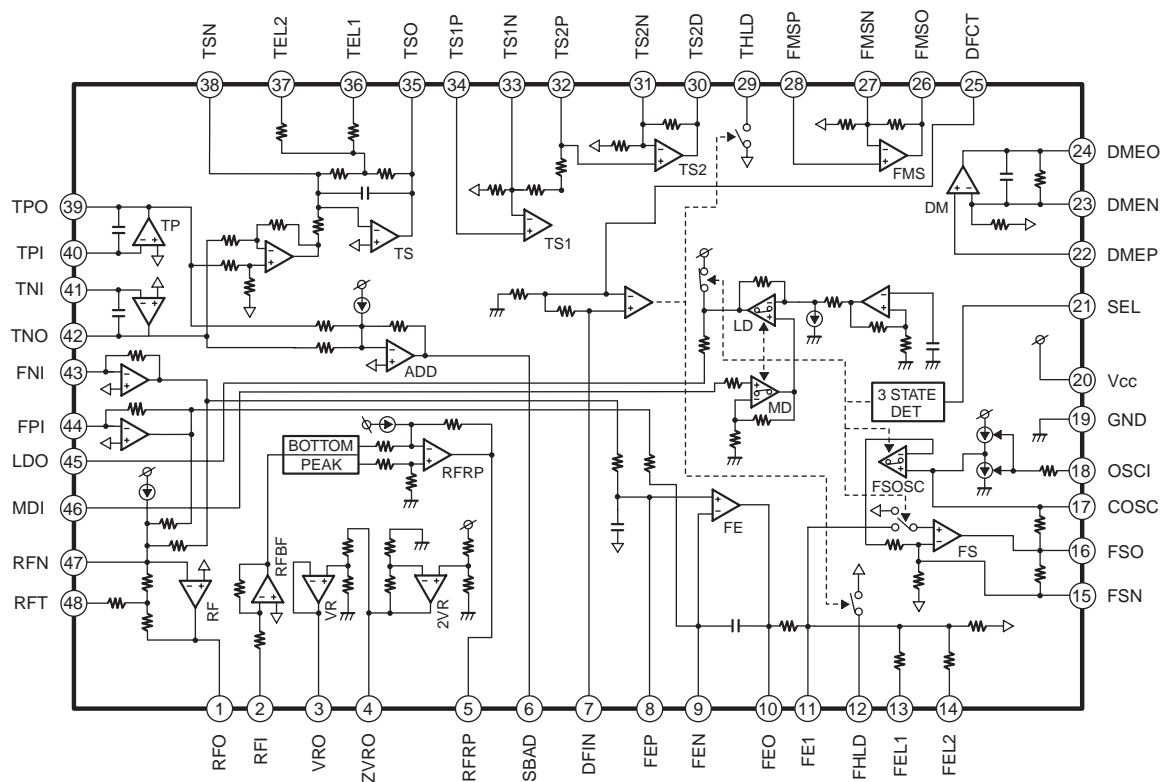
PIN No.	SYMBOL	I/O	FUNCTION DESCRIPTION	REMARKS												
43	FCSI	O	Focus actuator driving signal output terminal in the focus search mode. <table><tr><th>COMMAND</th><th>FCSI OUTPUT</th><th>OPERATION</th></tr><tr><td>FORST</td><td>H</td><td>Lens gets far away from disc</td></tr><tr><td>FOSET</td><td>L</td><td>Lens gets near disc</td></tr><tr><td>Others</td><td>HiZ</td><td>Other than focus search</td></tr></table>	COMMAND	FCSI OUTPUT	OPERATION	FORST	H	Lens gets far away from disc	FOSET	L	Lens gets near disc	Others	HiZ	Other than focus search	3-state output
COMMAND	FCSI OUTPUT	OPERATION														
FORST	H	Lens gets far away from disc														
FOSET	L	Lens gets near disc														
Others	HiZ	Other than focus search														
44	FKIC	O	Focus actuator driving signal output terminal in the focus gain adjusting mode. <table><tr><th>COMMAND</th><th>FKIC OUTPUT</th><th>OPERATION</th></tr><tr><td>FGASR</td><td>H</td><td>Lens gets far away from disc</td></tr><tr><td>FGASS</td><td>L</td><td>Lens gets near disc</td></tr><tr><td>Others</td><td>HiZ</td><td>Other than focus adjustment</td></tr></table>	COMMAND	FKIC OUTPUT	OPERATION	FGASR	H	Lens gets far away from disc	FGASS	L	Lens gets near disc	Others	HiZ	Other than focus adjustment	3-state output
COMMAND	FKIC OUTPUT	OPERATION														
FGASR	H	Lens gets far away from disc														
FGASS	L	Lens gets near disc														
Others	HiZ	Other than focus adjustment														
45	FEL2	O	Focus again adjusting analog switch output terminals.	—												
46	FEL1	O	Focus again adjusting analog switch output terminals.	—												
47	FEI	I	Focus error signal input terminal.	Analog output												
48	TESH	I	Tracking error signal input sample holding analog switch input terminal.	—												
49	TEOF	O	Tracking servo operation ON/OFF analog switch output terminal. VREF when the tracking servo is OFF.	—												
50	SBAD	I	Sub beam adding signal input terminal.	Analog input												
51	RFRP	I	RF ripple signal input terminal.	—												
52	VREF	I	Reference voltage input terminal. (+2.1V)	—												
53	RFI	I	RF signal input terminal.	Analog input												
54	GNDA	—	Analog ground terminal.	—												
55	DTSC2	O	Data slice control EFM signal passive output terminal.	—												
56	MONIT	O	Monitor output terminal.	—												
57	DTSC1	O	Data slice control EFM signal negative output terminal.	—												
58	VDDA	—	Analog supply voltage terminal. (+5V)	—												
59	PDONT	I	PDO output control terminal. At "L" level, PDO output is made to HiZ by force.	—												
60	PDO	O	Phase error signal output terminal between EFM signal and PLCK.	3-state output												

PIN FUNCTION

PIN No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS								
61	TMAX	O	TMAX signal output terminal. HiZ at time of system clock. <table><tr><th>TMAX PERIOD</th><th>TMAX OUTPUT</th></tr><tr><td>Longer than specified period</td><td>L</td></tr><tr><td>Shorter than specified period</td><td>H (2VREF)</td></tr><tr><td>Specified period</td><td>HiZ</td></tr></table>	TMAX PERIOD	TMAX OUTPUT	Longer than specified period	L	Shorter than specified period	H (2VREF)	Specified period	HiZ	3-state output
TMAX PERIOD	TMAX OUTPUT											
Longer than specified period	L											
Shorter than specified period	H (2VREF)											
Specified period	HiZ											
62	LPFN	I	LPF amplifier inverting input terminal for PLL.	—								
63	LPFO	O	LPF amplifier output terminal for PLL.	—								
64	VCOF	I	VCO filter terminal.	—								
65	TESTX	I	Test terminal.	—								
66	HS	O	Double speed monitor output terminal. Double speed operation at "L" level.	—								
67	GNDD	—	Digital ground terminal.	—								
68	SPDA	O	Processor status signal output terminal. Correction process judging result, memory buffer capacity, etc.	—								
69	COFS	O	Correction system frame periodic signal output terminal. 7.35kHz.	—								
70	WOCK	O	Word clock output terminal. Normally, 88.2kHz.	—								
71	CHCK	O	Channel clock output terminal. Normally, 44.1kHz.	—								
72	BCK	O	Bit clock output terminal. Normally, 1.4112MHz.	—								
73	AOUT	O	Audio data output terminal.	—								
74	EMPH	O	Emphasis ON/OFF indication signal output terminal. Emphasis ON at "H" level.	—								
75	DOUT	O	Digital out output terminal.	—								
76	TEST2	I	Test terminal. Normally, keep at "H" level or open.	With pull-up resistor								
77	VDDX	O	Oscillator supply voltage terminal.	—								
78	XI	I	Crystal oscillator connecting terminal.									
79	XO	O										
80	GNDX	O	Oscillator ground terminal.	—								

IC BLOCK DIAGRAM & DESCRIPTION

IC701 TA2065N



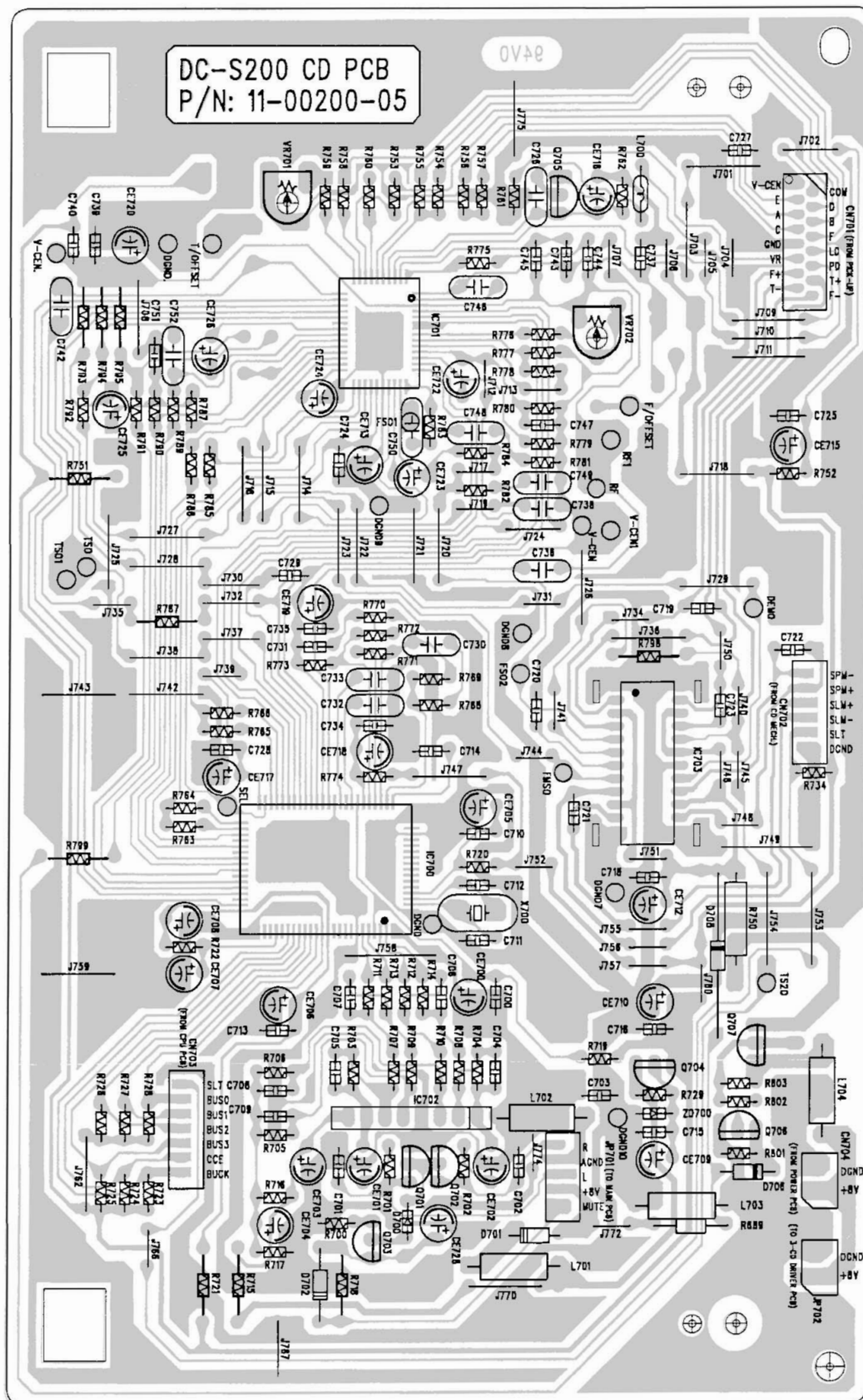
PIN FUNCTION

Pin No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS
1	RFO	O	RF amp(RF AMP) output terminal.	
2	RFI	I	RF ripple signal generating circuit input terminal.	Connected to RFO through C.
3	YRO	O	VR amp output terminal.	
4	2YRO	O	2VR amp output terminal.	
5	RFRP	O	RF ripple signal output terminal.	
6	SBAD	O	Defects detection signal output terminal.	
7	DFIN	I	Defect detecting comparator positive phase input terminal.	
8	FEP	I	Focus error balance adjusting input terminal.	Adjusting semi-fixed resistor is connected.
9	FEN	I	Focus error amp(FE AMP) negative phase input terminal.	
10	FEO	O	Focus error amp(FE AMP) output terminal.	
11	FEI	I	Focus output amp(FS AMP) positive phase input terminal.	
12	FBLD	I	Hold switch terminal for defect.	
13	FEL1	I	Focus gain adjusting terminal.	
14	FEL2	I	Focus gain adjusting terminal.	
15	FSN	I	Focus output amp(FS AMP) negative phase input terminal.	
16	FSO	O	Focus output amp(FS AMP) output terminal.	
17	COSC	O	Focus search signal generating capacitor connecting terminal.	
18	OSCI	I	Focus search signal generating built-in current source control input terminal.	
19	GND	-	Ground terminal.	
20	VCC	-	Power source terminal.	
21	SEL	I	Analog switch control signal input terminal.	
22	DMEN	I	Disc motor amp(DM AMP) positive phase input terminal.	
23	DMEN	I	Disc motor amp(DM AMP) negative phase input terminal.	
24	DMEO	O	Disc motor amp(DM AMP) output terminal.	
25	DFCT	I	Defect detecting comparator negative phase input terminal.	
26	FMSO	O	Feed motor output amp(FMS AMP) output terminal.	
27	FMSN	I	Feed motor output amp(FMS AMP) negative phase input terminal.	

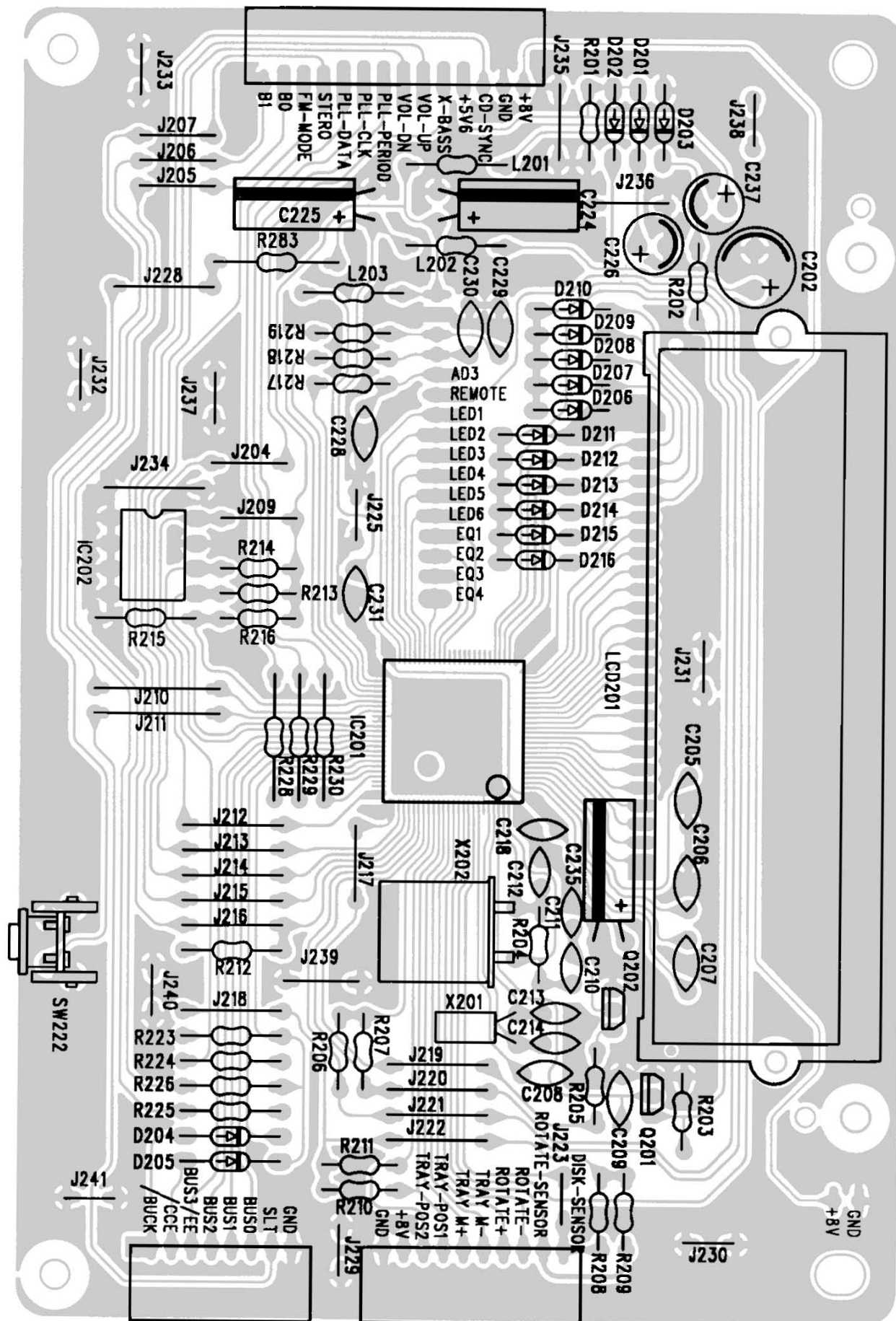
Pin No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS
23	FXSP	I	Feed motor output amp(FMS AMP) positive phase input terminal.	
29	THLD	I	Hold switch terminal for defect.	
30	TS2O	O	Tracking servo amp 2(TS2 AMP) output terminal.	
31	TS2N	I	Tracking servo amp 2(TS2 AMP) negative phase input terminal.	
32	TS2P	I	Tracking servo amp 2(TS2 AMP) positive phase input terminal.	
33	TS1N	I	Tracking servo amp 1(TS1 AMP) negative phase input terminal.	
34	TS1P	I	Tracking servo amp 1(TS1 AMP) positive phase input terminal.	
35	TSO	O	Tracking output amp(TS AMP) output terminal.	
36	TEL1	I	Tracking gain adjusting terminal.	
37	TEL2	I	Tracking gain adjusting terminal.	
38	TSN	I	Tracking output amp(TS AMP) negative phase input terminal.	
39	TPO	O	Sub-beam I-Y amp output terminal.	Connected to TPI through adjusting feedback resistor.
40	TPI	I	Sub-beam I-Y amp input terminal.	Connected to PIN diode E.
41	TNI	I	Sub-beam I-Y amp input terminal.	Connected to PIN diode F.
42	TNO	O	Sub-beam I-Y amp output terminal.	Connected to TNI through adjusting feedback resistor.
43	FNI	I	Main-beam I-Y amp input terminal.	Connected to PIN diode A+C.
44	FPI	I	Main-beam I-Y amp input terminal.	Connected to PIN diode B+D.
45	LDO	O	Laser diode amp output terminal.	Connected to laser diode circuit.
46	MDI	I	Monitor photo diode amp input terminal.	Connected to monitor photo diode.
47	RFN	I	RF amp negative phase input terminal.	
48	RFT	I	RF amp peaking terminal.	



WIRING DIAGRAM (CD P.W.BOARD)



WIRING DIAGRAM (LCD & CPU P.W.BOARD)



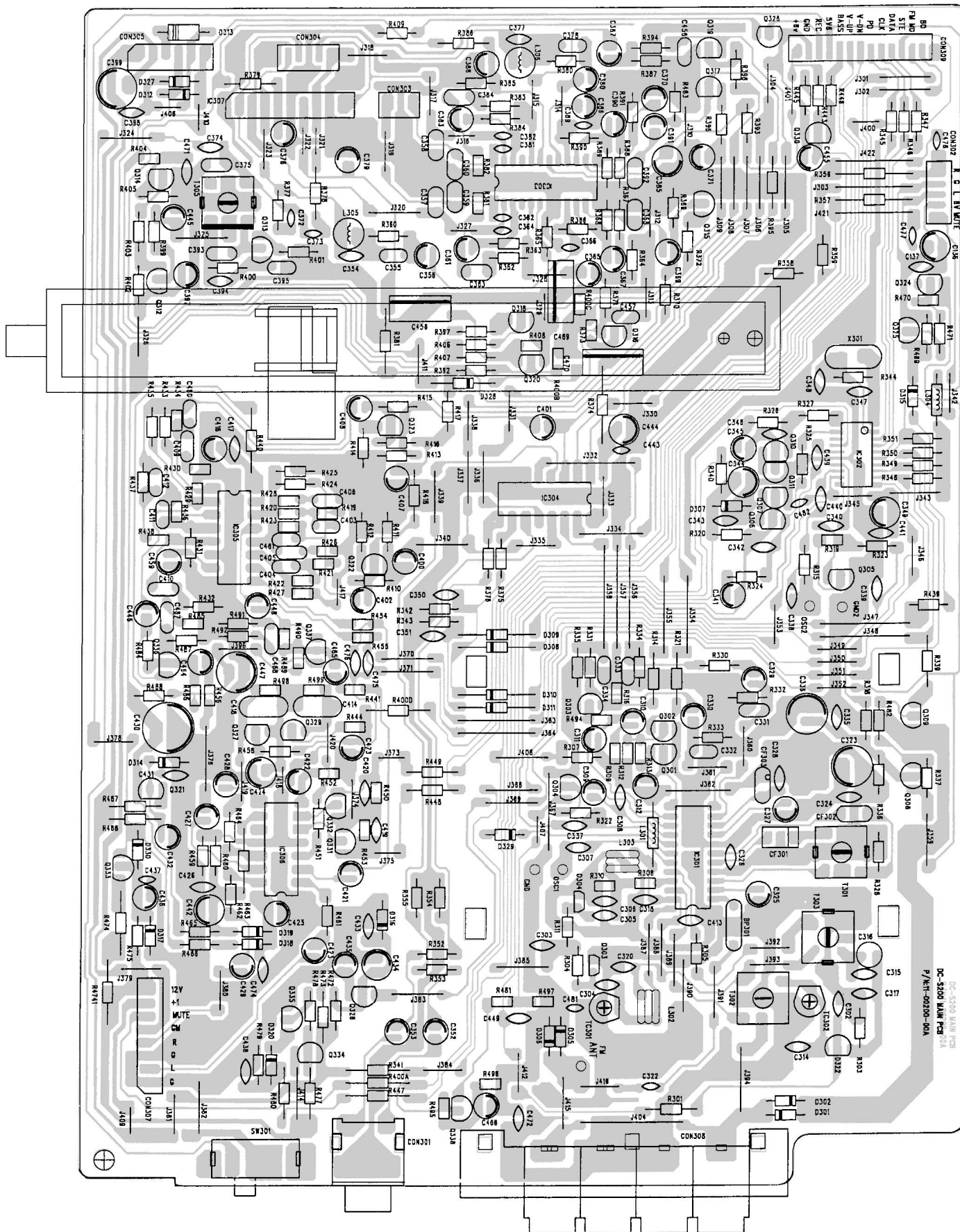
CAUTION FOR CONTINUED PROTECTION AGAINST RISK OF FIRE REPLACE ONLY WITH SAME TYPE AND RATING FUSES AFTER REPLACEMENT TO QUALIFIED SERVICE PERSONNEL

CAUTION FOR CONTINUED PROTECTION AGAINST RISK OF FIRE REPLACE ONLY WITH SAME TYPE AND RATING FUSES AFTER REPLACEMENT TO QUALIFIED SERVICE PERSONNEL

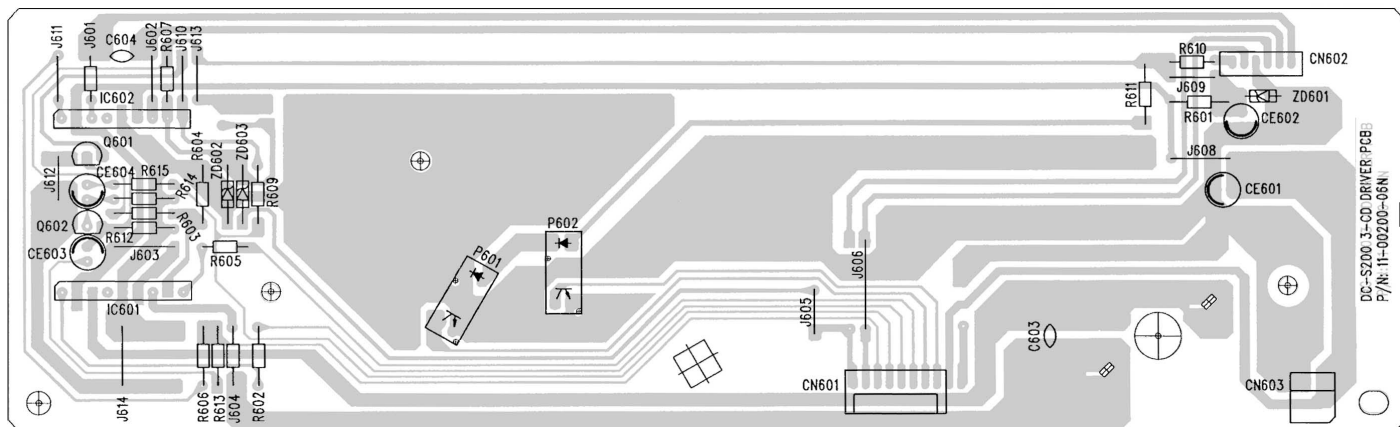
DC-S200 POWER PCB

P/N:11-00200-07 DC-S200 POWER PCB

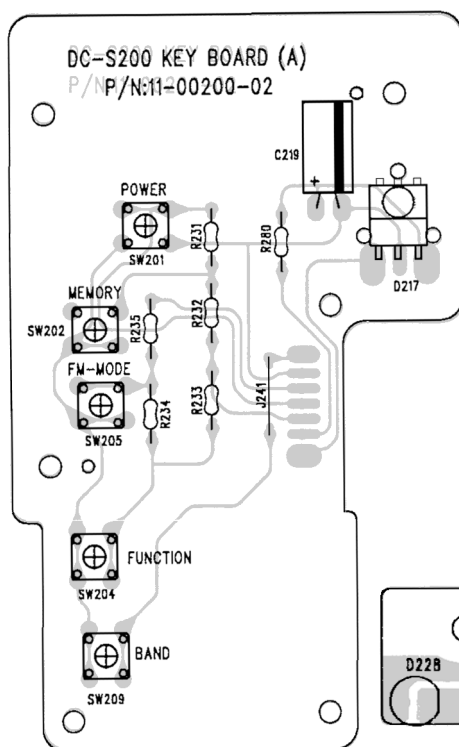
WIRING DIAGRAM (MAIN P.W.BOARD)



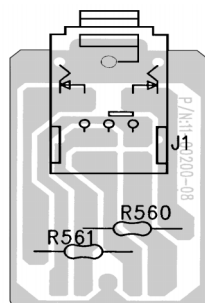
WIRING DIAGRAM (3CD DRIVER,KEY(A),(B),(C),HEADPHONE,LED)



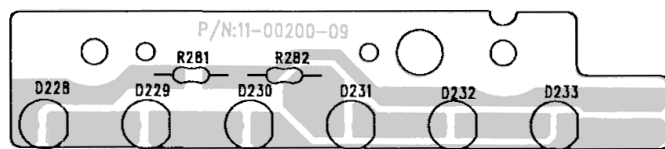
3 CD DRIVER P.W.BOARD



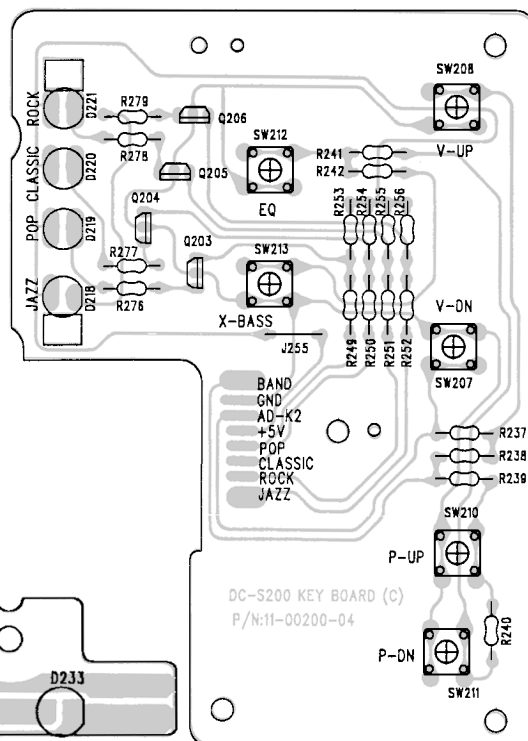
KEY(A)



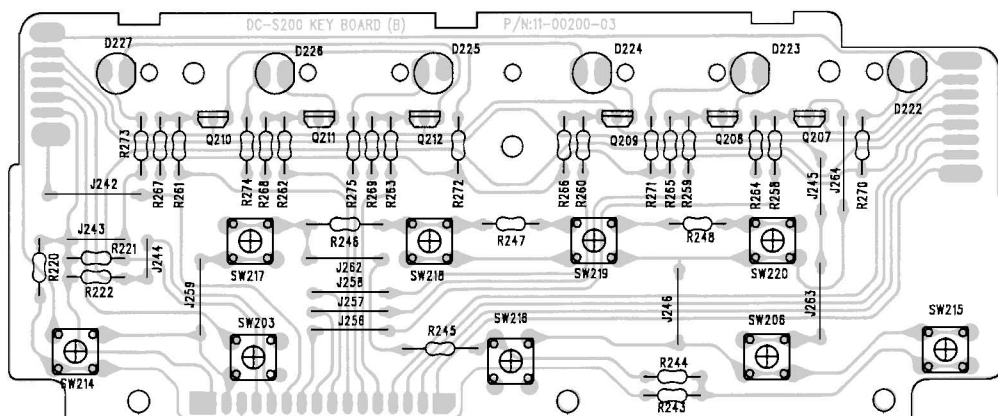
HEAD PHONE



LED



KEY(C)



KEY(B)

VOLTAGE OF IC & TRANSISTOR

MAIN SECTION

IC301 TA2104AN

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	0	0.8	0	4.4	4.7	4.1	4.7	0	0	3.9	0.7	0.7	3.8	4	0.7	1.1
AM	0	0	1	5.2	5.2	4.5	5.2	0	0.2	4.6	0.7	0.7	5.2	5.2	5.2	5.2
Pin No.	17	18	19	20	21	22	23	24								
FM	1.3	4.7	4.5	4.7	4.7	4.7	4.7	4.4								
AM	5.2	5	5	1.1	1.1	0.7	0.8	0								

IC302 TC9257F (VD input condition)

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STANDBY	0.2	4.4	4.7	4.7	0	4.9	0.3	0.3	0.3	0	5.4	5.5	0	0	0	0
POWER ON	2.8	2.8	4.7	4.7	0	0.4	0.4	0.3	5.3	0	5.5	5.5	2.8	0	0	2.7
Pin No.	17	18	19	20												
STANDBY	0	0	0	0												
POWER ON	5.4	0	0	0												

IC303 TA8189

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY A	0	0	1.3	2	1.4	1.4	0	0	1.9	1.3	0	0	0.9	0	1.3	1.9
PLAY B	0	0	1.3	2	1.4	1.4	0	0	1.9	1.3	0	0	0.9	0	1.3	1.9
Pin No.	17	18	19	20	21	22	23	24								
PLAY A	1.5	5.2	6	1.4	2	1.3	0	0								
PLAY B	1.5	5.2	0	1.4	2	1.3	0	0								

IC304 TC4052 (VD Input condition)

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	0	0	0	0	0	0	0	4.8	4.8	0	0	0	0	0	7.7

IC305 TC4052 (Preset EQ on POP stage)

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	0	0	0	0	0	0	0	5.5	5.5	0	0	0	0	0	7.7

TC306 PT2256 (X' Bass on)

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STANDBY	0	0.3	0.3	0.3	0.3	5.4	5.3	0	5.3	0.7	0	0.3	0.3	0.3	0.3	5.4
POWER ON	0	3.5	3.5	3.5	3.5	6.4	6.4	0	6.4	7	4	5.5	3.5	3.5	3.5	6.5

IC307 UPC1330NA

(V)

Pin No.	1	2	3	4	5	6	7	8	9
CASS PLAY	0	0	0	0	0	6.6	0	0	0
CASS REC	0	0	0	11.3	0	6.8	0	0	0

Transistors (Test on cassette Recorder condition)(V)

Q312 733			Q313 945			Q314 945		
E	C	B	E	C	B	E	C	B
7.8	7.6	7	0.7	6	0.3	0	0	0.7

Transistors (Test on Cassette "A" under playing condition)

(V)

Q315 945			Q316 8050			Q317 945			Q318 945			Q319 8050			Q320 945			Q321 8050		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
0	0	0.7	0	0	0	0	0	0.7	0	4.2	0	0	0	0	0	0	0.6	7.8	12	8.4
Q322 945			Q323 945			Q324 8550			Q325 945			Q326 8050			Q327 8050			Q328 945		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
0.6	4.9	1.2	0.6	4.9	1.2	7.8	7.8	7	0	0.1	0.7	7.8	12	8.5	3.5	3.5	0	3.5	3.5	0
Q329 8050			Q330 945			Q331 945			Q332 945			Q333 8050			Q334 8050			Q335 945		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
0	4.5	0	0	0	0.7	0	6.4	0	0	6.4	0	5.5	11	6.2	12	12	11	0	0.1	0.7
Q336 945			Q337 945			Q338 945														
E	C	B	E	C	B	E	C	B												
0.9	4.1	0.6	0.9	4	1.6	1.7	4.9	2.2												

VOLTAGE OF IC & TRANSISTOR

CD SECTION Test on CD Stop condition

IC700 TC9284

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	2.3	2.5	4.7	2.5	2.3	0	4.7	4.7	4.7	0	4.7	0	4.6	4.6	4.6
Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Voltage	4.6	4.6	4.8	2.2	4.7	0	0.1	0	4.7	0	0.7	1.9	1.9	1.9	1.8	1.9
Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Voltage	1.6	1.9	4.7	1.7	4.7	1.9	1.9	1.8	3.8	0	2.2	2.2	1.9	1.9	1.9	1.9
Pin No.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Voltage	1.9	1.4	1.4	1.9	1.9	0	1.9	0.6	1.9	4.7	5	1.9	0	1.5	4	1.3
Pin No.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Voltage	0	0	0	1.5	2	1.8	1.8	0.6	0	1.7	2.3	4.7	4.8	2.1	2.1	0

IC701 TA2065F

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	1	1.9	1.9	3.8	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9
Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Voltage	1.9	2.3	0	4.5	0	1.9	1.9	1.9	1.3	1.9	1.9	1.9	1.9	3.0	1.9	1.9
Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Voltage	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	0	1.9	1.1

IC703 TA2092F

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	3.6	7.7	3.6	1.9	1.9	3.6	1.9	3.5	7.7	3.6	0	0	3.6	7.7	3.5
Pin No.	17	18	19	20	21	22	23	24								
Voltage	1.9	0	7.7	1.9	3.5	7.7	3.6	0								

Transistors (Working point)

(V)

Q701 8050			Q702 8050			Q703 608			Q704 8050			Q705 608			Q706 536			Q707 8550		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
0	0	0.6	0	0	0.6	1.2	1.1	0.5	5	6.8	5.7	4.8	1.8	4	0	0	0.7	8	8	7.2

3CD DRIVER SECTION INITIAL POSITION

IC601 TA7291S

(V)

Pin No.	1	2	3	4	5	6	7	8	9
Voltage	0	7.9	0.4	0	0	7.9	0.4	4.7	0

IC602 TA7291S

(V)

Pin No.	1	2	3	4	5	6	7	8	9
Voltage	0	7.9	0.4	0	0	7.9	0.4	4.9	0

Transistors (Working point)

(V)

Q601 8050			Q602 8050			P601 RPL-547				P602 RPL-547			
E	C	B	E	C	B	1	2	3	4	1	2	3	4
0	0	0	0	0	0	1.1	0	0.1	0	2.3	1.1	0.1	0

VOLTAGE OF IC & TRANSISTOR

CPU & DISPLAY SECTION (VD Input & X'Bass on condition)

IC201 DJ3T

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	2	1.6	4.7	2.5	1.7	-	1.1	0.7	4.9	4.9	0	0	0	0	4.9
Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Voltage	4.9	4.7	0	0	4.9	0	0	0	0	0	-	-	4.8	4.8	0	4.7
Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Voltage	4.8	0	0	0	0	4.7	0	-	-	0.4	0	3.8	4.6	4.6	4.6	4.6
Pin No.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Voltage	0	0	4.8	0	0	0	0	0	0	4.6	0	4.6	4.6	-	-	-
Pin No.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Voltage	-	-	-	-	-	-	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Pin No.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Voltage	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2
Pin No.	97	98	99	100												
Voltage	2	1.8	0.8	4.8												

IC202 AT24C02-10PC

(V)

Pin No.	1	2	3	4	5	6	7	8
Voltage	0	0	0	0	0.1	4.7	0	4.7

Transistors (Working point)

(V)

Q201 1740			Q202 930			Q203 608			Q204 608			Q205 608			Q206 608			Q207 608		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
0	4.7	0	0	0	0	4.6	0	3	4.6	0	3	1.7	0	1	3	0	4.6	1.7	0.1	1

Q208 608			Q209 608			Q210 608			Q211 608			Q212 608		
E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
1.7	0.1	1	1.7	0.1	1	1.7	0.1	1	1.7	0.1	1	1.7	0.1	1

POWER SECTION

IC501 BA5417

(V)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
STANDBY	0	0	0	16.5	0	0	0	0.1	0	0	0	0	0	0	0
POWER ON	0	15.1	7.9	15.7	7.9	15.2	0	11.6	8.5	0.6	0	0	0.6	0	0

IC502 NJM7812A

(V)

Pin No.	1	2	3
Voltage	15.5	0	12

Transistors (Working point)

(V)

Q501 8050			Q502 8050			Q507 8050			Q509 2058		
E	C	B	E	C	B	E	C	B	E	C	B
0	0	0	0	0	0	8.7	1.2	9.3	8	1.2	8.7

SANYO

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